## CLAIMS

1. A text entry system comprising:

(a) a user input device comprising an auto-correcting keyboard region comprising a plurality of the characters of an alphabet, wherein each of the plurality of characters corresponds to a location with known coordinates in the auto-correcting keyboard region, wherein each time a user interacts with the user input device within the auto-correcting keyboard region, a location associated with the user interaction is determined and the determined interaction location is added to a current input sequence of contact locations;

(b) a memory containing a plurality of objects, wherein each object is further associated with a promotion value, and wherein each of the plurality of objects in memory is further associated with one or a plurality of predefined groupings of objects;

(c) an output device with a text display area; and

(d) a processor coupled to the user input device, memory, and output device, said processor comprising:

(i) a distance value calculation component which, for each determined interaction location in the input sequence of interactions, calculates a set of distance values between the interaction locations and the known coordinate locations corresponding to one or a plurality of characters within the auto-correcting keyboard region;

(ii) a word evaluation component which, for each generated input sequence, identifies one or a plurality of candidate objects in memory, and for each of the one or a plurality of identified candidate objects, evaluates each identified candidate object by calculating a matching metric based on the calculated distance values and the promotion value associated with the

object, and ranks the evaluated candidate objects based on the calculated matching metric values;

(iii) a selection component for identifying one or a plurality of candidate objects according to their evaluated ranking, presenting the identified objects to the user, and enabling the user to select one of the presented objects for output to the text display area on the output device; and

(iv) a promotion component for setting a relative promotion value associated with each object in memory as a function of the user setting interaction with said plurality of objects.

2. The system of Claim 1, wherein the promotion value associated with each object in memory comprises the ordinal ranking of the object with respect to other objects in memory, wherein an object associated with a higher promotion value corresponds to a numerically lower ordinal ranking, and wherein when an object is selected for output by the user, the promotion component adjusts the ordinal ranking associated with said selected object by an amount that is a function of the ordinal ranking of said object prior to said adjustment.

3. The system of Claim 1, wherein when an object is selected by the user for output to the text display area on the output device, the promotion component increases the promotion value associated with the selected object by a relatively large increment, and decreases by a relatively small decrement the promotion value associated with unselected objects that are associated with the same grouping as the selected object.

4. A text entry system comprising:

(a) a user input device comprising an auto-correcting keyboard region comprising a plurality of the characters of an alphabet, wherein each of the plurality of characters corresponds to a location with known coordinates in the auto-correcting keyboard region, wherein each time a user interacts with the user input device within the auto-correcting keyboard region, a location associated with the user interaction is determined and the determined interaction location is added to a current input sequence of interaction locations;

(b) a memory containing a plurality of objects, wherein each object is further associated with a promotion value, and wherein each of the plurality of objects in memory is further associated with one or a plurality of predefined groupings of objects;

(c) an output device with a text display area; and

(d) a processor coupled to the user input device, memory, and output device, said processor comprising:

(i) a distance value calculation component which, for each generated key activation event location in the input sequence of key activation events, calculates a set of distance values between the key activation event location and the known coordinate locations corresponding to one or a plurality of keys within the auto-correcting keyboard region;

(ii) a word evaluation component which, for each generated input sequence, identifies one or a plurality of candidate objects in memory, and for each of the one or a plurality of identified candidate objects, evaluates each identified candidate object by calculating a matching metric based on the calculated distance values and the promotion value associated with the object, and ranks the evaluated candidate objects based on the calculated

matching metric values;

(iii) a selection component for identifying one or a plurality of candidate objects according to their evaluated ranking, presenting the identified objects to the user, and enabling the user to select one of the presented objects for output to the text display area on the output device; and

(iv) a promotion component for setting a relative promotion value associated with each object in memory.

5. A text entry system comprising:

(a) a user input device comprising an auto-correcting keyboard region comprising a plurality of the characters of an alphabet, wherein each of the plurality of characters corresponds to a location with known coordinates in the auto-correcting keyboard region, wherein each time a user interacts with the user input device within the auto-correcting keyboard region, a location associated with the user interaction is determined and the determined interaction location is added to a current input sequence of contact locations;

(b) a memory containing a plurality of objects, wherein each object is a string of one or a plurality of characters forming a word or a part of a word, wherein each object is further associated with a frequency of use;

(c) an output device with a text display area; and

(d) a processor coupled to the user input device, memory, and output device, said processor comprising:

(i) a distance value calculation component which, for each determined interaction location in the input sequence of interactions, calculates a set of distance values between the interaction locations and the known coordinate

locations corresponding to one or a plurality of characters within the auto-correcting keyboard region;

(ii) a word evaluation component which, for each generated input sequence, identifies one or a plurality of candidate objects in memory, and for each of the one or a plurality of identified candidate objects, evaluates each identified candidate object by calculating a matching metric based on the calculated distance values and the frequency of use associated with the object, and ranks the evaluated candidate objects based on the calculated matching metric values; and

(iii) a selection component for identifying one or a plurality of candidate objects according to their evaluated ranking, presenting the identified objects to the user, and enabling the user to select one of the presented objects for output to the text display area on the output device.

6. The system of Claim 5, wherein the word evaluation component calculates the matching metric for each candidate object by summing the distance values calculated from each interaction location in the input sequence to the location assigned to the character in the corresponding position of the candidate object, and applying a weighting function according to the frequency of use associated with the object.

7. The system of Claim 6, wherein each character of the alphabet associated with the auto-correcting keyboard region is assigned a Cartesian coordinate and wherein the distance value calculation component calculates the distance between the interaction location and the location corresponding to a character according to standard Cartesian coordinate distance analysis.

8. The system of Claim 6, wherein the frequency of use associated with each candidate object in memory comprises the ordinal ranking of the object with respect to other objects in memory, wherein an object associated with a higher relative frequency corresponds to a numerically lower ordinal ranking.

9. The system of Claim 6, wherein the word evaluation component adds an increment value to the sum of the distance values prior to applying a weighting function according to the frequency of use associated with the candidate object.

10. The system of Claim 5, wherein the word evaluation component calculates a matching metric for each candidate object by summing the distance values calculated from each interaction location in the input sequence to the location assigned to the character in the corresponding position of the candidate object, and applying a weighting function according to the frequency of use associated with the object.

11. The system of Claim 5, wherein the selection component presents the identified one or a plurality of candidate objects for selection by the user in a candidate object list in the text display area.

12. The system of Claim 5, wherein a user selection of a character that is associated with a an interaction outside of the auto-correcting keyboard region accepts and outputs the determined highest ranked candidate object at a text insertion point in the text display area prior to outputting the selected character at the text insertion point in the text display area.

13. The system of Claim 5, wherein user selection of an object for output at a text insertion point in the text display area terminates the current input sequence such that the next interaction within the auto-correcting keyboard region starts a new input sequence.

14. The system of Claim 5, wherein the word evaluation component determines, for each determined interaction location in each input sequence of interaction locations, the closest known location corresponding to a character, and constructs an exact typing object composed of said determined corresponding characters in the order corresponding to the input sequence of interaction locations.

15. The system of Claim 5, wherein the selection component identifies the highest ranked candidate object and presents the identified object at the text insertion point in the text display area on the output device.

16. The system of Claim 5, wherein the processor further comprises a stroke recognition component that determines for each user interaction within the auto-correcting keyboard region whether the point of interactionis moved less than a threshold distance from the initial interaction location, and whereby

when the point of interaction is moved less than a threshold distance from the initial interaction location, the stroke recognition component determines that the user interaction is a tap interaction, and the location determined to be associated with the user interaction is added to the current input sequence of interactionlocations to be processed by the distance value calculation component, the word evaluation component, and the selection component, and whereby

when the point of interactionis moved greater than or equal to a threshold

distance from the initial interaction location, the stroke recognition component determines that the user interaction is one of a plurality of stroke interaction that are associated with known system functions, and classifies the stroke interactionas one of the plurality of predefined types of stroke interactions.

17. The system of Claim 5, wherein when a threshold number of interaction locations in the input sequence are further than a threshold maximum distance from the corresponding character in the sequence of characters comprising a given candidate object, said object is identified as no longer being a candidate object for the selection component.

18. The system of Claim 5, wherein the processor further comprises a frequency promotion component for adjusting the frequency of use associated with each object in memory as a function of the number of times the object is selected by the user for output to the text display area on the output device.